

Remarks

Claims 1-20 were pending in the application. Claims 2-7, 9-12 and 14-19 have been withdrawn from consideration. New claims 21-23 have been added. Accordingly, claims 1, 8, 13 and 20-23 are at issue.

Applicants respectfully traverse the objections to the specification with respect to the allegation that the claimed subject matter of “hydraulic series” is not mentioned in the specification. Contrary to this assertion, antecedent basis for the term “hydraulic series” is contained in the specification at page 5, line 2. Accordingly, the objection to the specification is improper and should be withdrawn.

Similarly, Applicants traverse the rejection of claim 8 under 35 U.S.C. §112 for the reasons outlined above. In addition to being supported in the specification, the term “hydraulic series” is a standard term of art well known to those skilled in the art, as shown by the attached copy of the search results of the USPTO Patent Full-Text and Image Data Base showing that at least 55 issued patents utilize the term “hydraulic series” in their specification. The term “hydraulic series” is analogous to the equally common term of “electrical series” , with both terms indicating that flow (in one case fluid and in the other case electric) passes through each element of the “series” in turn, one element after the other, as opposed to the equally common terms of “hydraulic parallel” or “electric parallel” which indicate that the flows moves simultaneously between two points through multiple parallel elements. Furthermore, an example of tubes runs that are in hydraulic series is clearly illustrated in Fig. 1 which shows that the tube runs 22, 24, and 26 of each tube 20

are connected in hydraulic series so that the fluid flows through each run 22, 24, and 26 one after the other. In view of the foregoing, the rejection of claim 8 under §112 should be withdrawn.

Claim 1 has been amended to overcome the rejection based on Martins et al. 6,502,305 by further characterizing the slits so that each edge of each slit is not displaced with respect to the opposite edge of the slit. This claim language is directed towards the elected species of Fig. 3, which structure is not shown in Martins et al. or any of the other references cited in the Office Action. Indeed, Martins et al. specifically discloses that the edges of the slits are displaced with respect to each other by flattening of the stamping (24). See Martins et al. col. 4, lines 5-15. Accordingly, the rejection of claim 1 should be withdrawn.

Applicants respectfully traverse the rejection of claim 8 based on Martins et al. Claim 8 recites the plurality of spaced rows of flattened tubes and defining aligned tube runs in each row, with the aligned ones of the tube runs being connected in hydraulic series. Martins et al. fails to disclose this structure. Rather, Martins discloses a radiator (1) having a single row of tubes and a condenser (2) having a single row of tubes, with the single row of tubes of the radiator (1) not being connected in hydraulic series to the single row of tubes in the condenser (2). Accordingly, the rejection of claim 8 is improper and should be withdrawn.

With respect to the comment in the rejection of claims 8, 10, 13, and 20 that the phrase “the absence of removal of any material” is not germane to the issue of patentability

of the device itself, Applicants do not understand the basis for this comment. The quoted limitation characterizes the slit and is clearly structural in nature. Furthermore, the quoted phrase is clear to one skilled in the art and easily allows for one to determine the scope of the claim. Additionally, with respect to the assertion that the phrase is directed towards “the method of forming the device”, the phrase does not describe any method for forming the slit, but merely describes a structural characteristic of the slit and the fin in that the fin and slits structurally retain all of the original fin material, which clearly distinguishes the claimed structure from a fin structure where the original fin material is missing at the location of a slit. To the extent that this comment may be repeated by the Examiner, Applicants specifically request that the Examiner provide a further explanation of the meaning of the comment together with a citation to the specific rules and/or case law that is being relied upon to support the comment.

Applicants respectfully traverse the rejection of claim 13 and 20 as unpatentable over Waldorf 4,688,394 in view of Martins et al. Claim 13 recites a gas cooler having a plurality of spaced rows of flattened tubes from front to back. Martins et al. fails to disclose this structure. Rather, Martins discloses a combination of a radiator (1) having a single row of tubes with a condenser (2) having a single row of tubes, with neither the radiator or condenser having multiple rows of tubes. Waldorf adds nothing in this regard. Accordingly, Martins et al. and Waldorf fail to disclose or suggest the structure recited in claim 13. For this reason alone the rejection of claims 13 and 20 should be withdrawn. Additionally, claims 13 and 20 are specifically directed toward a gas cooler employed in a


transcritical cooling system, which is not shown or suggested by Martins et al. and Waldorf. While Martins et al. does disclose a condenser for a standard vapor cycle cooling system it does not in any way disclose or suggest a transcritical cooling system, and accordingly cannot disclose or suggest a gas cooler for use in a transcritical cooling system. Waldorf adds nothing in this regard. Accordingly, for this additional reason alone, Martins and Waldorf failed to disclose or suggest the claimed invention and the rejection of claims 13 and 20 should be withdrawn,

New claim 21 depends from claim 1 and more specifically characterizes the fins as serpentine fins. New claim 22 is similar to amended claim 1, but eliminates an unnecessary limitation. New claim 23 is similar to original claim 8, but again eliminates unnecessary limitations.

In view of the foregoing reconsideration of the objection to the specification and the rejection of claims 1, 8, 13 and 20, favorable consideration of added claims 21-23, and allowance of the case is respectfully requested.

Respectfully submitted,

By

  
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